



## INSULATION FOR HISTORIC COMMERCIAL RESOURCES

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Note: This policy sheet addresses treatments that will be undertaken on historically-significant buildings, spaces, or materials. All work shall conform to the *Secretary of the Interior's Standards for Rehabilitation*, which in part state: the historic character of a property shall be retained and preserved; and the removal of historic materials or the alteration of features and spaces that characterize a property shall be avoided. For a complete listing of the Standards, see the National Park Service website at: <http://www.nps.gov/history/hps/tps/tax/rehabstandards.htm>

### Non-Occupied Spaces (attics, mezzanines, shafts, etc.)

- **Cellulose Insulation**  
Cellulose insulation is recommended for these non-occupied spaces. Insulation can be blown into the spaces between the exposed framing members. Baffles must be provided between the roof rafters at the juncture with the ceiling/floor joists (if applicable) to ensure free air movement if the space allows for ventilation.
- **Foam Insulation**  
Foam insulation shall not be installed in non-occupied spaces such as the attic perimeter, on the underside of the roof deck, or between the ceiling/floor joists. Foam insulation can only be used in a limited capacity at "by-pass" areas such as vents, chimney joints, conduit penetrations, etc.
- **Batt Insulation**  
Kraft-faced batt insulation is recommended and should be placed with the faced side (vapor barrier) down. Batt insulation installed over existing batt insulation to increase the attic insulation R value should be unfaced and placed perpendicular to the existing batts.  
  
Kraft faced batt insulation should not be installed between roof rafters if the attic is vented.
- **Radiant Barriers**  
Radiant barriers, if used, shall be installed on top of attic floor insulation with the reflective side up. Radiant barriers may also be installed on attic structural members (roof rafters). Existing materials, such as plaster, shall not be removed from ceilings or walls in order to install a radiant barrier.

### Wood-Framed Exterior Walls

- **Cellulose Insulation**  
Wall cavities shall not have cellulose insulation blown into the enclosed cavities unless all of the following condition can be met:
  - If the insulation is installed through the exterior wall, it can be installed by removing individual clapboard siding pieces or brick/masonry units, or by drilling holes in the original wood siding material. If insulation is installed through holes in the exterior wood siding material, the holes must be filled with wood plugs, sanded smooth, and primed and painted to match the surrounding siding finish. Plugged holes in the exterior siding material that are closed with plastic plugs are not allowable. Individual masonry units (stone or brick) shall not have holes drilled through the material for installation. Individual masonry units can be removed, or holes can be drilled through the mortar for insulation installation. Other siding materials (stucco, asbestos shingle, asphalt) should

be evaluated on a case by case basis to determine the best method of installation and patching. Insulation may also be installed through holes in the interior wall surfaces.

In addition, it is recommended that a vapor barrier be provided. A vapor barrier can be accomplished with an impermeable paint layer at the interior wall surface. Two layers of oil base paint or one layer of impermeable latex paint can create an acceptable vapor barrier.

- **Foam Insulation**  
No foam insulation of any kind shall be installed in enclosed wall cavities.
- **Batt Insulation**  
Where a rehabilitation project results in the removal of plaster or drywall, Kraft faced batt insulation may be installed between the wall studs. The Kraft faced side of the insulation must be placed toward the interior to act as an effective vapor barrier.

### **Basement/Crawl Spaces (Walls below grade)**

- **Cellulose Insulation**  
Cellulose Insulation is not typically used in basements and is not recommended.
- **Foam Insulation**  
Foam insulation may be installed at the rim joist between the floor joists and above the top of the masonry foundation wall only.  
  
Foam insulation shall not be installed on the masonry walls or on the underside of the floor deck.
- **Batt Insulation**  
Batt Insulation may be installed at the rim joist between the floor joists and above the top of the masonry foundation wall only.

Rigid foam insulation applied to the masonry walls is acceptable. Unheated crawl spaces provide unique insulation challenges and shall be reviewed on a case by case basis.

### **Exterior Masonry Walls**

- **Cellulose Insulation**  
Cellulose insulation should not be directly applied to exposed masonry walls, but can be placed in new wall framing built adjacent to existing walls.
- **Foam Insulation**  
No foam insulation of any kind shall be directly applied to exposed masonry walls or sprayed into new wall framing built adjacent to existing walls.
- **Batt Insulation**  
Batt insulation should not be directly applied to exposed masonry walls, but can be placed in new wall framing built adjacent to existing walls.
- **Rigid foam insulation**  
Rigid foam insulation applied to masonry walls is acceptable in non-significant or non-public spaces only.

When adding new furring strips to exposed masonry walls, it is recommended to keep the void spaces between furring strips clear. Do not fill these voids with insulation.

When adding wall framing to exposed masonry walls, it is recommended to locate the new construction away from the masonry wall by 1" to 2" in order to create a drainage channel between new and existing materials. Do not fill this void with insulation.

In most cases, it is not recommended to add new wall framing or furring strips to existing masonry walls with interior finishes (plaster) in place. This proposed work should be reviewed on a case by case basis.